CLAIMS

What is claimed is:

1. A prosthetic component implantable into a hollow interior portion of a first bone, said prosthetic component comprising:

elongate stem means having a distal section and a proximal section, said stem means further including a long axis; and

support plate means having first and second opposing sides, said first side being disposed on the proximal section of the stem means and including at least one flared plate surface having a medial section, and flaring outwardly from said proximal section in a distal to proximal direction such that an under surface of a terminal portion of a lip of said medial section forms an angle with the long axis of the stem means which is greater than ninety degrees.

2. A prosthetic component as defined in claim 1, wherein said flared plate surface is flared at a greater degree of flare than a flared stem surface so as to form an angle with said flared surface of less than 180 degrees, such that said

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flared stem surface and said flared plate section form a unitary double-flared contact surface.

3. A prosthetic component as defined in claim 2, wherein the first side of the support plate intersects with a surface in the proximal section of the stem means forming a smooth transition which is rounded so as to be characterized by an absence of corners and points to thereby enhance the settling action of the prosthetic component into the hollow portion of the first bone.

4. A prosthetic component as defined in claim 2, wherein substantially the entire proximal section of the stem means comprises the flared stem section and wherein the first side of the support plate means comprises the flared plate section.

5. A prosthetic component as defined in claim 4, wherein the flared stem section defines a substantially conical stem surface and the flared plate section defines a substantially conical plate surface such that unitary double-flared contact surface comprises a unitary double-cone contact surface.

6. A prosthetic component as defined in claim 2, wherein the flared plate surface forms an angle with a long axis of the stem means which is greater than ninety degrees to thereby enhance settling action of said flared plate surface against the load-bearing surface of the first bone.

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7. A prosthetic component as defined in claim 1, wherein the medial section of the flared plate surface extends outwardly from the proximal section of the stem means to define an overhang relative to said proximal section, said overhang having a greater length than any overhang which might extend outwardly from a lateral portion of said proximal section.

8. A prosthetic component as defined in claim 1, wherein the medial section of the flared plate surface forms an angle with the long axis of the stem means within a range between ninety degrees and one hundred twenty degrees.

9. A prosthetic component as defined in claim 1, wherein the medial section of the flared plate surface forms an angle with the long axis of the stem means within the range between ninety degrees and one hundred degrees.

10. A prosthetic component for implantation into a first bone for transferring mechanical stress between the first bone and a second bone, the fist bone having a load-bearing portion and a hollow interior portion, said prosthetic component comprising:

elongated stem means having a long axis and further including opposing proximal and distal sections; and

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support plate means including an at least partially non-planar first side attached to the proximal section of the stem means and an opposing second side, said first side extending outward from said proximal section such that said first side defines at least one flared plate section having a medial section and flaring outwardly from said proximal section in a distal to proximal direction such that an undersurface of a terminal portion of a lip of said medial section forms an angle with the long axis of the stem means which is greater than ninety degrees, said second side being configured to support a means for engaging with the second bone member to thereby enable load transfer between the first bone and said second bone member.

11. A prosthetic component as defined in claim 10, wherein the proximal section includes at least one flared stem section flaring outwardly in a distal to proximal direction and wherein the flared plate section is flared at a greater degree flare than the flared stem section so as to form an angle with said stem section of less than 180 degrees, wherein the first side of the support plate means forms a circumferential transition section with the proximal section

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of the stem means such that said flared stem section, said transition section and said flared plate section form a unitary double-flared contact surface.

12. A prosthetic component as defined in claim 11, wherein said circumferential transition section is rounded so as to be characterize by an absence of corners and points to thereby enhance the settling action of the prosthetic component into the hollow portion of the first bone.

13. A prosthetic component as defined in claim 11, wherein substantially the entire proximal section of the stem means comprises the flared stem section and wherein entire first side of the support plate means comprises the flared plate section.

14. A prosthetic component as defined in claim 13, wherein the flared stem section defines a substantially conical stem surface and the flared plate section defines a substantially conical plate surface such that the unitary double-flared contact surface comprises a unitary double-cone contact surface.

15. A prosthetic component as defined in claim 11, wherein the flared plate section forms an angle with a long axis of the stem means which is greater than ninety degrees to

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thereby enhance settling action of said flared plate section against the load-bearing surface of the first bone.

16. A prosthetic component as defined by claim 10, wherein the support plate means comprises medial, lateral, anterior and posterior sides, and wherein said medial, anterior and posterior sides collectively comprise said flared plate section.

17. A prosthetic component as defined in claim 10, wherein the stem means includes opposing anterior and posterior sides flaring outwardly in a distal to proximal direction and which collectively comprise a flared stem section.

18. A prosthetic component as defined in claim 10, wherein the stem means includes medial, lateral, anterior and posterior sides, said prosthetic component further comprising:

a medial triangular projection disposed upon the medial side of the stem means and projecting outward therefrom in a medial direction to increase surface area of contact of the prosthetic component with the first bone to thereby provide increased rotational stability of said prosthetic component relative to said first bone;

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wherein the medial triangular projection includes a rounded medial end intercoupling opposing sides which flare outwardly from said medial end in medial to lateral directions such that a cross section of said medial triangular projection taken along a plane perpendicular to the long axis of the stem means defines a conical section having a rounded tip which corresponds to the rounded medial end.

19. A prosthetic component as defined in claim 10 wherein the stem means and support plate means collectively comprise a femoral component of a hip prosthesis configured for insertion into a femur to thereby enable load transfer between the femur and acetabulum of a hip joint.

20. A prosthetic component as defined in claim 10 wherein the flared plate section generally forms an angle within a range of approximately 25 degrees to 35 degrees with respect to the second side of the support plate means.

21. A method for replacing a joint in a patient comprising the steps of:

(a) selecting a prosthetic component including a proximal section and a flared plate section flaring outward from said proximal section a joint motion surface extending

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outward from the plate section and a stem having a long axis, wherein the flared plate section includes a medial section flaring outwardly from the proximal section in a distal to proximal direction such that an under surface of a terminal portion of a lip of said medial section forms an angle with the long axis of the stem which is greater than ninety degrees;

(b) inserting the prosthetic component into medullary cavity of the first bone such that the proximal section engages with side walls of the medullary cavity in tandem with the flared plate section engaging with a load-bearing portion of the first bone; and

(c) inserting the joint motion surface into a second bone member to thereby enable load transfer between the first bone and the second bone member.

22. A method as defined in claim 21, further comprising the step of:

(d) preparing the load-bearing surface of the first bone and placing the flared plate section into contact therewith such that contacting portions of said flared plate section with the load-bearing surface form an angle with a long axis of the medullary cavity which is greater than ninety degrees to thereby enhance settling action of

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said flared plate section against said load-bearing surface.

23. A method as defined in claim 22, wherein step (b) further comprises inserting the prosthetic component into a femoral canal, and wherein step (c) further comprises inserting the joint motion surface into a corresponding acetabulum.

24. A prosthetic component as defined in Claim 1, said prosthetic component comprising:

a proximal body having a lateral side;

a stem disposed on a lower portion of the proximal body and extending therefrom in a distal direction, said stem having a longitudinal axis, wherein an average width of the proximal body in a medial-lateral dimension is substantially wider than the stem; and

a collar disposed on an upper portion of the proximal section and extending outward therefrom in a medial direction and in a posterior direction and in an anterior direction to thereby form a tri-directional, continuous medial-posterior-anterior overhang, said collar being characterized by an absence of any lateral overhang and wherein the posterior and anterior portions of said overhang each terminate in the lateral direction at a terminal posterior point and a terminal

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anterior point, respectively, along posterior and anterior sides of the proximal body, respectively, to thereby define a spacial posterior gap and a spacial anterior gap betwen the lateral side of the proximal body and said terminal posterior point and terminal anterior point, respectively.

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